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Representative Thomas E. Petri
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2 September 2011

The Honorable Ralph Hall
2405 Rayburn House Office Building
Washington, D.C. 20515

Re: LightSquared Hearing on September 8, 2011

Dear Chairman Hall,

I am writing on behalf of Save Our GPS Coalition and myself. I and my fellow professionals have been astounded with the FCC granting LightSquared conditional approval (FCC File No. SAT-MOD-20101118-00239) to push forward with their initiative to build a nationwide 4G-LTE wireless broadband network.

According to LightSquared's own report, most High Precision GPS devices would be rendered useless by LightSquared's actions. These are the very devices that surveyors around the country use every day.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared LLC company to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

We know of nothing feasible that can be done to make the high precision GPS receivers that surveying and mapping professionals use work properly when in the vicinity of a LightSquared base station. Additionally, we know of no currently available receiver, filter, antenna or other mitigation technology that would enable the construction of future High Precision GPS receivers and augmentation systems that are compatible with LightSquared's rollout plans. Finally, we believe that the most straightforward mitigation would be for LightSquared to use a different frequency band for their terrestrial network.

High-precision GPS equipment used by land surveyors, civil engineers, farmers, and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way Americans have built and managed our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc.

Across the country, High Precision GPS has become an essential tool for most land surveyors and geomatic professionals today and it is imperative that these GPS signals are not jeopardized by broadband

technology. The FCC must make clear, and the NTIA (National Telecommunications and Information Administration) must ensure, that LightSquared's license modification is contingent on a finding of no interference by LightSquared's signals on High Precision GPS usage. The findings of no interference must contain a high degree of certainty, because public welfare and safety depends on accurate systems. It will be too late to worry about fixing the problem when LightSquared's system is already up and running.

Just last year in October of 2010, I made a substantial investment into my own GPS technology, after using this technology in both the government and private sector for years. If the LightSquared request to the FCC goes forward, my private land surveying business and my current field practices using GPS will be rendered inoperative. To be more specific, without the use of GPS technology in my private practice, I will need to regress 20 years with other technology that will double my expenses. Furthermore, what should I do with my \$20,000 investment in GPS? That investment is not even 1 year old. I am having enough trouble in this difficult economy, and if LightSquared prevails with their request before the FCC, I will be out of business!

Just a few months ago, NASA announced that the last shuttle would be launched and never again. Through the 30 some years of the shuttle program, one of the greatest benefits has been the launching of satellites. These satellites have provided numerous benefits. But the greatest benefit to me and my business is the ability to now accurately land survey using GPS signals from these satellites. For this country to have had such huge successes with our space program that has cost trillions over the years, the fact that I now need to write a letter to you asking that you Save Our GPS is almost unfathomable. I never imagined that this day could ever be here, but it is, and I hope you know the seriousness of your decisions affecting GPS and GPS users. If nothing else, if LightSquared prevails, it will surely send our economy into a further tailspin, and unemployment will most certainly double.

Thank you for your concern and attention to this very important matter. I am available to meet with you to discuss this issue in more detail.

Respectfully,

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cc: Thomas E. Petri, Wisconsin 6th Congressional District Representative
Ron Johnson, US Senator from Wisconsin
Herb Kohl, US Senator from Wisconsin